The Coordination Number and the Translatory Motion of Particles in Aqueous Solutions of Electrolytes SOV/20-126-2-29/64

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

PRESENTED: January 29, 1959, by I. I. Chernyayev, Academician

SUBMITTED: January 16, 1959

Card 3/3

Samoylov, O. Ya.

PHASE I BOOK EXPLOITATION SOV/4186

Akademiya nauk SSSR

Stroyeniye veshchestva i spektroskopiya (Structure of Matter and Spectroscopy) Moscow, Izd-vo AN SSSR, 1960. 113 p. Errata slip inserted. 2,300 copies printed.

Ed.: K. V. Astakhov, Professor; Tech. Ed.: T. P. Polenova.

PURPOSE: This collection of articles is intended for physicists and chemists interested in spectroscopic methods of research on the structure of molecules and related problems.

COVERAGE: The articles contained in this collection were taken from the editorial files of the Zhurnal fizicheskoy khimii (Journal of Physical Chemistry) and are concerned with spectroscopic methods in research on the structure of molecules, the hydrogen bond, isotopic effects, problems in magnetochemistry, the structure of aqueous solutions of electrolytes, and the chemistry of complex compounds. References accompany individual articles.

The author thanks the following for having participated in determining the density of deuterocompounds: V. G. Golov, P. N. Nikolayev, V. I. Kucheryavyy, Ye. Z. Zhuravlev, V. I. Murzin, and L. S. Zhilkin. He thanks A. I. Brodskiy for his discussion of the results.

AVAILABLE: Library of Congress

Card 6/6

JA/dwm/ec
10-20-60

SAMOYLOV, O.Ya.

Vibration frequencies of water molecules in the first coordination layer of ions in aqueous solutions. Zhur. strukt. khim. 1 no.1:36-38 My-Je '60. (MIRA 13:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR.

(Water) (Coordination compounds)

SAMOYLOV, O.Ya.; KHU KE-YUAN' [Hu K'o-yüan]; NOSOVA, T.A.

Interaction of the HSO_4^- anion with neighboring water molecules in aqueous solutions. Zhur. struk. khim. 1 no.2:131-134 Jl-Ag '60. (MIRA 13:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.

(Sulfates)

SAMOYLOV, O.Ya.; KHU KE-YUAN' [Hu K'o-yuan]; NOSOVA, T.A.

Thermochemical method of determining the coordination numbers of ions in aqueous solutions. Zhur. strukt. khim. 1 no.4:404-409 N-D '60. (MIRA 14:2)

1. Institut neorganicheskoy khimii AN SSSR imeni N.S.Kurnakova.
(Coordination number)

SAMOYLOV, O. Ya.; TIKHOMIROV, V.I.

Salting out and exchange of water molecules in the vicinity of ions in aqueous solutions. Radiokhimiia 2 no.6:183-191 '60.
(MIRA 14:4)

(Salting-out)

SAMOYLOV, O.Ya.; SOKOLOV, D.S.

Effect of sodium and calcium ions on boron migration in underground brines. Dokl.AN SSSR 133 no.6:1428-1431 Ag '60. (MIRA 13:8)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii Ministerstva geologii i okhrany nedr SSSR. Predstavleno akad. I.I.Chernyayevym.
(Water, Underground) (Boron) (Sodium) (Calcium)

SAMOYLOV, O.Ya. (Moskva)

Investigating the structure of liquid metals. Izv. AN. SSSR. Otd. tekh. nauk. Met. i topl. no.3:116-118 My-Je '61. (MIRA 14:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova, AN SSSR.

(Liquid metals)

BUSLAYEVA, M.N.; SAMOYLOV, O.Ya.

Coordination numbers of some ions in aqueous solutions and their temperature dependence. Zhur.strukt.khim. 2 no.5:551-557 S-O '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

(Ions)

NOSOVA, T.A.; SAMOYLOV, O.Ya.

Using data on density to judge the structure of electrolyte aqueous solutions. Zhur.strukt.khim. 2 no.5:604-607 S-O '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

Electrolyte solutions)

23870

S/186/61/003/001/003/020
A051/A129

21,3200

AUTHORS: Kuznetsova, A.A., Samoylov, O.Ya., Tikhomirov, V.I.

TITLE: The salting-out action of cations and the covalency of their interaction with the water molecules of the solution

PERIODICAL: Radiokhimiya, v 3, no. 1, 1961, 10-13

TEXT: The cause for the decrease in the effectiveness of the salting-out agent with an increase in the covalency of its interaction with water, viz. the fact that the covalent interaction of the cation of the salting-out agent with the water molecules closest to it brings about a decrease in the effective charge of the cation (Ref. 1), was investigated. A comparative study was made of the salting-out action of the nitrates, the cations of which have the same charges and radii, but differ in the structure of their electron shells. A further study was made of the effect of nitrates of rubidium, thallium (I), nickel (II) and cobalt (II) on the distribution of small quantities of uranylnitrate between aqueous solutions and diethyl

Card 1/

The salting-out action of cations ...

ether. It was established that the chosen salting-out agents in the experiments were poorly soluble in diethyl ether and did not pass into the organic layer under the given conditions of the experiments. The relationship of the distribution coefficient of uranylnitrate to the concentration of the salting-out agents was investigated in the initial aqueous solutions. Table 1 shows the results of the determinations of the uranylnitrate distribution coefficients between diethyl ether and aqueous solutions containing Rb^+ and Tl^+ nitrates. It is seen therefrom that the coefficients of the uranylnitrate distribution between the diethyl ether and aqueous solutions containing these nitrates are very low, and the difference between the average values of α is slight. Table 2 lists the values of the coefficients of uranylnitrate distribution between diethyl ether and aqueous solutions in the presence of Mg^{2+}, Ni^{2+} and Co^{2+}, and the graph shows the graphical relationship of α to the concentration at 25°C. From the latter it is seen that in the case of cobalt and nickel nitrates the relationship of α (c) is expressed by one curve and they are much less effective as salting-out agents than Mg^{2+}. With an increase in the temperature from 0 to 25°C there is a drop in the distribution coefficient of the uranylnitrate in all cases, but

The salting-out action of cations ....

the indicated difference in the salting-out action of Ni^{2+} and Co^{2+} as compared to that of Mg^{2+} is maintained both at 0 and at 25°C. The authors conclude that the former relationship of the salting-out effect to the covalency of the interaction of its cations with the water molecules of the solution given in Ref 1 is confirmed. The observed effects were also investigated with relation to the pH of the solution. It is assumed by the authors that in view of the experimental results this observed effect should decrease with an increase in the acidity and the salting-out agents can become reverse in their salting-out action. There are 2 tables, 1 graph and 5 Soviet-bloc references.

Card 3/6

23871
S/186/61/003/001/004/020
A051/A129

21,3200

AUTHORS: Samoylov, O.Ya., Tikhomirov, V.I., Ionov, V.P., Kuznetsova, A.A.

TITLE: The relationship between the effectiveness of the salting-out agent and the hydration of the salting-out ion

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 14-18

TEXT: In the present work the authors have investigated the relationship between the effectiveness of the salting-out agent and the hydration of the salting-out ion, using the qualitative theory developed in Ref 1. It is seen that the stronger the salting-out cation is hydrated, the more effective the given salting-out agent should be in relation to it, i.e., the higher should be the value of its $\Delta E_{\text{salting-out}}$ (a decrease in the energy of activation of the water molecule extraction from the closest surroundings of the extracted ion). Thus,

$$\Delta E_{\text{salting-out}} \approx \frac{k}{s_i^3} \quad (3),$$

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The relationship between the effectiveness ...

where k is a coefficient depending on the cation charge of the salting-out agent, dipole moment of the water molecule and characteristics of the water solution, and S_i – the average (effective) distance between the salting-out cation and the i^{th} cation of the salting-out agent. With an increase in the hydration of the salting-out ion, the value of $E_{salting\text{-}out}$ related to the action of a certain salting-out agent on it increases:

$$(\Delta E_{salt.-out})_i > (\Delta E_{salt.-out})_j \quad \text{or} \quad (\Delta E_{salt.-out})_i = \gamma (\Delta E_{salt.-out})_j \tag{4}$$

where the coefficient $\gamma > 1$. For various salting-out agents it is assumed that the values of the coefficients are about equal, then:

$$(\Delta E^s_{salt.-out})_i = \gamma (\Delta E^s_{salt.-out})_j \tag{5}$$

where s = 1,2,3, corresponding to the different salting-out agents. The authors investigate the salting-out ions i and j, whereby the i-ion is characterized by a higher hydration than the j-ion. It is established that the relationship of $\Delta E_{salt.-out}$ to the hydration of the salting-out ion

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The relationship between the effectiveness...

brings about the equations

$$\left(\frac{a^1}{a^2}\right)_i > \left(\frac{a^1}{a^2}\right)_j \qquad (9)$$

(where a is the distribution coefficient [Ref 17]). It is confirmed experimentally by investigating the extraction of uranyl and thorium with tributylphosphate from water solutions containing magnesium, calcium and strontium nitrates. Equation 9 indicates that with a strengthening of the hydration of the salting-out ion the relative increase in the distribution coefficient grows; determined by the growth of the effectiveness of the salting-out agent. Table 1 lists the determined values of the distribution coefficients of uranyl and thorium, and table 2 lists the ratios of the distribution coefficients for uranyl and thorium in the presence of various salting-out agents from a group of magnesium, calcium and strontium nitrates. The ratios taken are that of the distribution coefficients in the presence of a more effective salting-out agent to the value of the distribution coefficient in the presence of a less effective salting-out agent. The data of table 2 show that these ratios for thorium are greater than for uranyl. Since thorium is

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The relationship between the effectiveness...

hydrated more strongly in aqueous solutions than uranyl, it is concluded that the experimental results confirm the validity of equation (9). There are 2 tables, 9 formulas and 6 references: 4 Soviet-bloc, 2 non-Soviet-bloc.

Card 4/6

KUZ'MICH, V.I.; PROKHORENKO, V.K.; SAMOYLOV, O.Ya.; FISHER, I.Z.

Temperature dependence of coördination numbers of particles in liquid solutions. Dokl. AN SSSR 141 no.2:400-401 N '61.
(MIRA 14:11)

1. Belorusskiy gosudarstvennyy universitet im. V.I.Lenina i Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR. Predstavleno akademikom I.I.Chernyayevym.
(Solution (Chemistry)) (Dynamics of a particle)

SAMOYLOV, O.YA.

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE
reports read at the 4th Conference convened in KIYEV from 1 to 5 June 1959, published by the publishein House of KIYEV University, KIYEV, USSR, 1962

(13)

34622

S/186/62/004/001/001/008
E075/E436

21.4200

AUTHORS: Golovatenko, R.T., Samoylov, O.Ya.

TITLE: Temperature dependence of the distribution coefficients during extraction of uranyl nitrate with diethylether from aqueous solutions

PERIODICAL: Radiokhimiya, v.4, no.1, 1962, 25-33

TEXT: The present work is a part of an investigation into the phenomena of salting-out during extraction of mineral salts from aqueous solutions with diethyl ether. The authors determined the distribution coefficients for uranyl nitrate, in the presence of a number of salting-out agents, from 0 to 25°C. Nitrates of Li, Na, K, Cs, Mg, Ca, Co, Ni, Zn, Sr and Cd as well as nitric acid were used as the salting-out agents at various concentrations. It was found that the salting-out efficiency increases as follows: Sr^{2+}, Ca^{2+}, Mg^{2+} and Cs^{+}, K^{+}, Na^{+}, Li^{+}. Ni^{2+} and Co^{2+} are less effective than Mg^{2+}, which is connected with a decrease in the energy of activation (ΔE_{vys}) of water molecules removed from the solution containing a given salt, when the interaction of Ni^{2+} and Co^{2+} with the water molecules increases. Above 15°C for the

Card 1/3

Temperature dependence ...

concentrations of 0.94 and 1.88 g/ions NO_3^- per litre of solution, the distribution coefficients in the presence of $Mg(NO_3)_2$ are lower than for Ni and Co nitrates, whereas the reverse is true for all the other cases. This is connected with the increased interaction of the cations with water molecules at the higher temperatures. It was established that there is a linear dependence between $\ln \alpha$ and $1/RT$ (α - distribution coefficient, R - gas constant, T - absolute temperature) in the presence of all salting-out agents for the concentrations of 0.47, 0.94, 1.88, 3.25 g/ions NO_3^- per litre of solution. In the absence of the salting-out agents the relationship is not linear. It would appear that the activation energy ΔE_{vys} can be evaluated from the slopes of the straight lines obtained in the presence of the salting-out agents and the slopes of tangents to the curves obtained in the absence of salting-out agents at the corresponding temperatures. The latter slopes, however, are greater than the slopes of the straight line graphs at all temperatures, which would lead to negative values of ΔE_{vys}. The greater value of the slope of the tangents, as compared with the slopes of the

Card 2/3

Temperature dependence ...

linear graphs is connected with differences in the nature of the hydrated forms of uranyl nitrate passing into ethyl ether solution, which depends on the presence of a particular type of salting-out agent and its concentration in the aqueous phase. The differences are due to changes in the number of water molecules which are removed from the neighbourhood of UO_2^{2+} ion when it passes into the ethereal layer. There are 6 figures and 2 tables.

SUBMITTED: July 15, 1961

Card 3/3

SAMOYLOV, O.Ya.; TIKHOMIROV, V.I.

Molecular-kinetic nature of the phenomenon of salting-out. Ekstr.; teor.,prim.,app. no.2:34-36 '62. (MIRA 15:9)
(Extraction (Chemistry)) (Salts)

BUSLAYEVA, M.N.; SAMOYLOV, O.Ya.

Effect of the stabilization of the structure on the coordination numbers of alkali metal cations in aqueous solutions. Zhur. strukt.khim. 4 no.5:682-686 S-O '63. (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR.

YASTREMSKIY, P.S.; SAMOYLOV, O.Ya.

Stabilization of the structure of aqueous solutions by molecules of nonelectrolytes and the dielectric constant. Zhur.strukt.khim. 4 no.6:844-849 N-D '63. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR i Volgogradskiy pedagogicheskiy institut imeni S.A.Serafimovicha.

EREMBURG, B.G.; SAMOYLOV, O.Ya.

Structural parameters of calcite-type carbonates and the nature of the Me - O bond. Zhur.strukt.khim. 4: no. 6:868-871 N-D '63. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR i Zapadno-Sibirskoye geologicheskoye upravleniye.

SAMOYLOV, O.Ya.; GOLOVATENKO, R.T.; YASHKICHEV, V.I.

Influence of covalence of the interaction of a salting out cation with water molecules on the effectiveness of salting out. Radiokhimiia 5 no.4:499-504 '63. (MIRA 16:10)

(Salting out) (Cations) (Water)

DUDNIKOVA, K.T.; SAMOYLOV, O.Ya.

Solubility of gypsum in aqueous solutions of salting-out agents. Radiokhimiia 5 no. 6:683-686 '63. (MIRA 17:7)

GRIGOROVICH, V.I.; SAMOYLOV, O.Ya.

Solubility of gypsum in aqueous solutions of the chlorides of lanthanum, praseodymium, neodymium, and samarium at 25 C. Radiokhimiia 5 no. 6:686-690 '63. (MIRA 17:7)

SAMOYLOV, O.Ya.

Structure of water. Ukr. fiz. zhur. no.4:387-393 Ap '64.
(MIRA 17:8)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR, Moskva.

NOSOVA, T.A.; SAMOYLOV, O.Ya.

Dehydration and hydration as dependent on salted-out ion hydration. Zhur. strukt. khim. 5 no.3:363-370 My-Je '64. (MIRA 18:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

BUSLAYEVA, M.N.; SAMOYLOV, O.Ya.; YASHKICHEV, V.I.

Covalence of cation reaction with water molecules and the heats of solution of Rb, Tl, Mg, Co and Ni nitrates. Radiokhimiia 7 no.1:113-115 '65. (MIRA 18:6)

MALENKOV, G.G.; SAMOYLOV, O.Ya.

Electrostatic interaction and coordination of molecules in water. Zhur. strukt. khim. 6 no.1:9-15 Ja-F '65.
(MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR. Submitted June 11, 1964.

SAMOYLOV, O.Ya.; RABINOVICH, I.B.; DUDNIKOVA, K.T.

Effect of small additions of a second component on the structure of liquids. Zhur.strukt.khim. 6 no.5:768-770 S-O '65. (MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR i Gor'kovskiy gosudarstvennyy universitet imeni N.I.Lobachevskogo. Submitted June 19, 1965.

SAMOYLOV, O.Ya.; NOSOVA, T.A.

Structural characteristics of water. Zhur.strukt.khim. 6 no.5:798-808 S-O '65. (MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.

MYASNIK, S.; SAMOYLOV, P.

The giant's heart began to beat. NTO 5 no.10:44-46 O '63.
(MIRA 17:1)

1. Predsedatel' soveta nauchno-tekhnicheskogo obshchestva Kachkanarskogo gornoobogatitel'nogo kombinata (for Myasnik). Uchenyy sekretar' soveta nauchno-tekhnicheskogo obshchestva Kachkanarskogo gornoobogatitel'nogo kombinata (for Samoylov).

ZAKHVATKIN, B.V.; SAMOYLOV, P.A.

Two rock-drill units for hole boring. Biul. TSNIICHM no.7:31-32 '58. (MIRA 11:6)

1.Gornoye upravleniye Kuznetskiy metallurgicheskiy kombinat (for Zakhvatkin). 2.Tomskiy politekhnicheskiy institut im. Kirova (for Samoylov).

(Rock drills)

AUTHORS: Alimov, O.D. and Samoylov, P.A. SOV-127-58-8-20/27

TITLE: The Expedient Use of Drilling Carriages in the Mines of Gornaya Shoriya (O tselesoobraznosti primeneniya burovykh karetok na rudnikakh Gornoy Shorii)

PERIODICAL: Gornyy zhurnal, 1958, Nr 8, pp 71-72 (USSR)

ABSTRACT: The authors describe the use of the drilling carriages BT-3 with 2 perforators KTsM-4 or 2 perforators PR-35. Blast holes are rapidly drilled and the efficiency of workers is considerably increased. The authors recommend changes in the construction of carriages and the building of larger ones with room for 3 or 4 perforators. There is 1 table.

ASSOCIATION: Tomskiy politkhnicheskiy Institut (The Tomsk Politechnical Institute)

1. Mines--Equipment 2. Drilling machines

Card 1/1

ALIMOV, O.D.; BASOV, I.G.; SAMOYLOV, P.A.

Some results of investigating the duty of pneumatic bore-hammers. (MIRA 11:11)
Izv. TPI 106:9-23 '58.
(Rock drills--Pneumatic driving)

1. SAMCYLOV, P. A.
2. USSR (600)
4. Spinning Machinery
7. Improving Zvorykin type spinning machines. Tekst.prom. 12 no. 10. 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

SAMOYLOV, P.M.

Remarks on hygroscopic cores. Lit.proizv. no.4:25-26 Ap '55.
(Coremaking) (MLRA 8:6)

SAMOYLOV, P.M.

Mechanism of the physiological and toxic action of thyroid hormones on cell energetics. Vop. med. khim. 11 no.4:3-17 Jl-Ag '65. (MIRA 18:8)

1. Kafedra biokhimii zhivotnykh Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

SAMOYLOV, P.M.

Biochemical changes in the cardiac muscle in thyrotoxicosis.
Vop. med. khim. 7 no.6:563-574 N-D '61. (MIRA 15:3)

1. Institut farmakologii i khimioterapii AMN SSSR, Moskva.
(HEART--MUSCLE)
(HYPERTHYROIDISM)

CHIGIRINETS, A.A.; SAMOYLOV, P.N.

Copying holder. Mashinostroitel' no.6:30 Je '63. (MIRA 16:7)

(Drilling and boring machinery)

SAMOYLOV, P.M.

Oxidative phosphorylation and glycolysis in the rat myocardium in experimental thyrotoxicosis. Vop. med. khim. 9 no.2:138-196 Mr-Ap '63. (MIRA 17:8)

1. Laboratoriya biokhimii Instituta farmakologii i khimioterapii AMN SSSR, Moskva.

SAMOYLOV, P. P.

PA 190T78

USSR/Medicine (Veterinary) - Infectious Diseases Oct 51

"Methods of Diagnosing Spontaneous Recovery of Sheep From Brucellosis," P. P. Samoylov, Aspirant, Moscow Vet Acad

"Veterinariya" Vol XXVIII, No 10, pp 26-28

Negative allergic and serological reactions in sheep which had brucellosis establish their recovery. By using this method of diagnosis, it is possible to form healthy and immune flocks.

190T78

SAMOYLOV, P.P.

ZAMURIY, I. R., KOSTRYULINA, Z. N., SAMOYLOV, P. P.

Goats - diseases

Diagnosis of Bang's disease in nursing ewes and goats by the ring reaction. Kar. i zver., 5. No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

OPALOVSKIY, A.A.; SAMOYLOV, P.P.

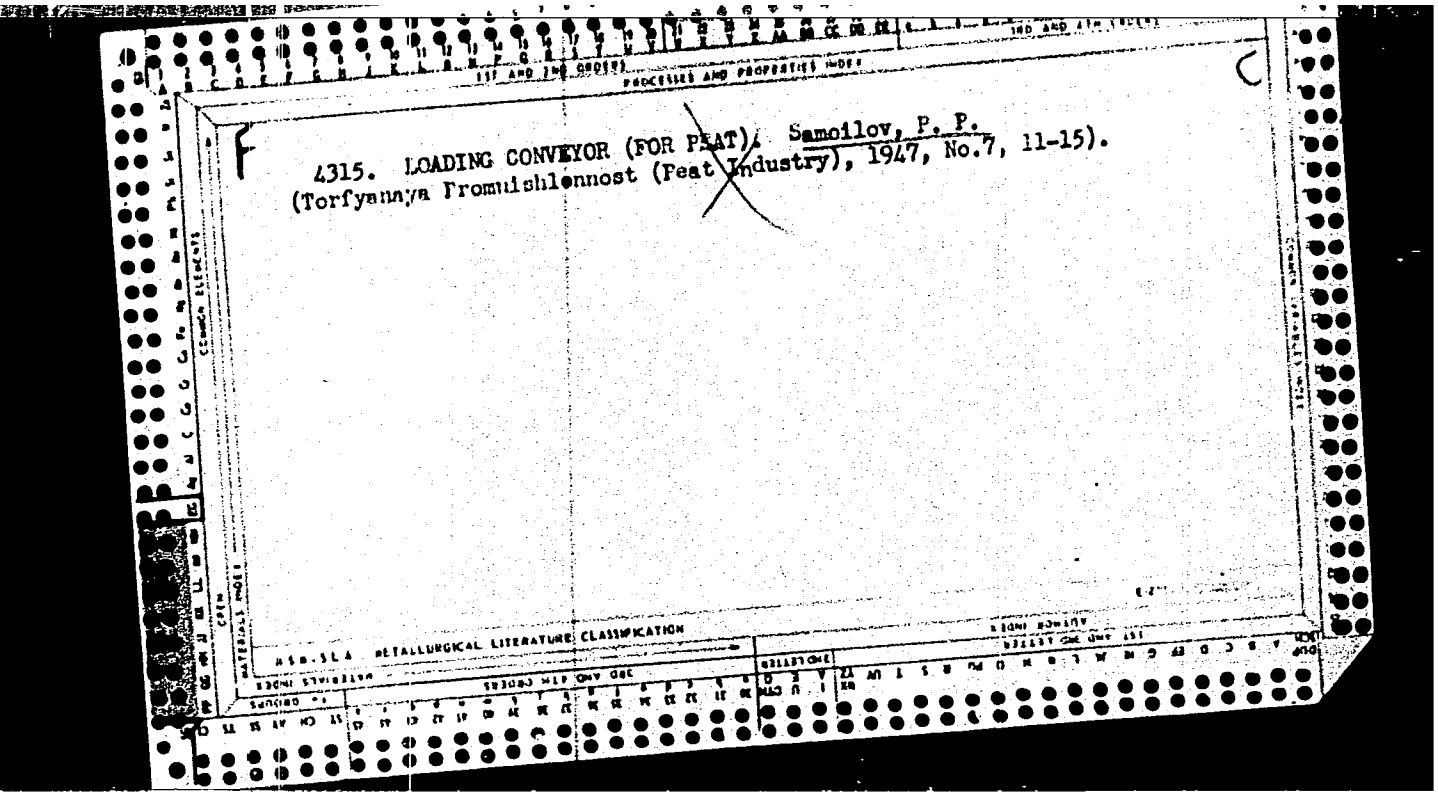
Determination of the composition of solid phases by the method of analytical extrapolation. Izv. SO AN SSSR no.11 Ser.khim.nauk no.3:86-91 '63. (MIRA 17:3)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.

SAMOYLOV, P.P.; ALIVERDIYEV, A.A., kand. veterin. nauk

Contagious pustular stomatitis in sheep. Veterinariia 41 no.2: 33-34 F '65. (MIRA 18:3)

1. Dagestanskiy sel'skokhozyaystvennyy institut (for Samoylov).
2. Dagestanskaya nauchno-issledovatel'skaya veterinarnaya stantsiya (for Aliverdiyev).



4315. LOADING CONVEYOR (FOR PEAT). Samoilov, P. P. (Torfyanaya Promyshlennost (Peat Industry), 1947, No.7, 11-15).

SAMOYLOV, P. P.

PA 16/49T52

USSR/Engineering Jul 48
Peat Industry
Tracks

"Results of Performance Tests of Portable Rail Tracks Developed by Engineer Vystavkin," P. P. Samoylov, Engr Glavtorf MES, 3/7 p

"Torf Prom" No 7

Reports successful trials of subject invention which was described in "Torfyanaya Promyshlennost'" No 7, 1947.

16/49T52

SAMOYLOV, P. P.

20045 SMAOYLOV, P. P. Nekotoryye Rezul'taty propitki shpal po. sposobu superobmazki na torpotransporte. Torf. prom-st', 1949, No. 6, s. 28-29.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

VYSOTSKIY, Konstantin Petrovich; LARIONOV, Vladimir Sergeyevich; SAMOYLOV, Pavel Pavlovich, inzhener [deceased]; STOYLIK, M.A., redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[Transportation of peat] Transport torfa. Moskva, Gos.energ.izd-vo, 1955. 256 p. (MLRA 9:4)

(Peat--Transportation)

Samoylov, P.S.

89-1-14/29

AUTHOR: Samoylov, P. S.

TITLE: The Electron Spectrum of Pu^{240} (Elektronnyy spektr Pu^{240})-

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 1, pp. 81 - 84 (USSR)

ABSTRACT: The Pu^{240} spectrum was measured by means of a ß-spectrometer with double focusing. Besides the measuring of energy, also the conversion coefficients were determined with the following results:

1. E_e in KeV | shell | in U^{236} E_γ in KeV | average value of E_γ in KeV

24,63	L_{II}	45,57	
28,48	L_{III}	45,64	
40,45	M_{II}	45,68	45,62 ± 0,10
41,39	M_{III}	45,69	
44,2	N	45,64	
83,08	L_{II}	104,02	
87,02	L_{III}	104,18	103,95 ± 0,50
98,87	M_{II}	104,05	
102,1	N	103,54	

2. For E_γ = 45,62 KeV the following relative conversion coefficients were measured:

Card 1/2

The Electron Spectrum of Pu^{240}.

$\frac{L_{II}}{L_{III}} = 1,05 \pm 0,05$ $\frac{M_{II}}{M_{III}} = 1,40 \pm 0,05$ $\frac{L}{M} = 2,6 \pm 0,2$

Therefore this γ- quantum belongs to the E 2-type.

3. For E_γ = 103,95 KeV the following conversion coefficients were measured: $\frac{L_{II}}{L_{III}} = 1,7 \pm 0,2$, $\frac{L}{M} = 2,8 \pm 0,3$

Therefore this γ-quantum belongs to the E 2-type.

4. The two first levels of U^{236} therefore have an energy of 45,6 and 149,6 MeV with the corresponding spin values of 2+ and 4+.

There are 3 figures, 1 table, and 9 references, 4 of which are Slavic.

SUBMITTED: August 31, 1957

AVAILABLE: Library of Congress

Card 2/2

SAMOYLOV, P. S., Cand Phys-Math Sci (diss) -- "The coefficients of internal conversion and multipolarity of low-energy gamma-transitions in the nuclei of U-236, U-233, and Np-237". Moscow, 1959. 11 pp (Moscow Engineering-Phys Inst), 100 copies (KL, No 14, 1960, 126)

85858

S/048/59/023/012/002/009
B006/B060

24.6810

AUTHOR: Samoylov, P. S.

TITLE: New Data on the Am^{241} Decay

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol. 23, No. 12, pp. 1416 - 1430

TEXT: The present extensive paper offers a great number of data distinctly compiled in tables and diagrams. The author investigated the electron spectrum of Am^{241} by means of a β-spectrometer with double focusing (focusing angle = $\pi\sqrt{2}$). Full particulars are given of the axial-symmetrical and specular-symmetrical field (Pavinskiy type). Fig. 1 shows the field distribution in the magnet gap. The field potential was measured by the compensation method, the accuracy was 2.10^{-2} % for the range H = 100 oe. The spectrometer was calibrated by use of the K-conversion line of Cs^{137} and the L-conversion line of Am^{241}. 14 radioactive samples were investigated by 23 series of measurements. 12 of the samples were obtained by

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New Data on the Am^{241} Decay

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B006/B060

evaporation onto aluminum- or celluloid foils, two of them being prepared by Khlebnikov. Geiger-Müller-counters were applied as indicators. All numerical data of measurements referring to the conversion electrons of Am^{241} are compiled in Table 1, covering 4 pages. Full particulars of the measured electron spectra are given in Figs. 2-6. The electron spectrum exhibits the intensive Auger electron peaks O_1 - O_7 in the range of 1 - 3.9 kev; for higher energies also lines of the internal conversion electrons (No. 1 - 100) occur besides the peaks O_8 - O_{45} of the Auger electrons. Numerical data on the Auger electrons are given in Table 2. The intensity of the lines was determined according to their area in the spectrum. Several observed transitions are separately discussed: 26.36 kev, 27 kev, 33.16 kev, 42.8 kev, 76 kev, 43.38 kev, 55.52 kev, 59.57 kev, 67 kev, 70 kev, 99.1 kev, 102.8 kev, 123 kev, 126.6 kev, 158.8 kev, 164.7 kev, 166.5 kev, 207.8 kev, 234.4 kev, 268 kev, 304.4 kev, 333.4 kev, 369.4 kev as well as some other γ- and Auger transitions. A great number of data is supplied and compared with results, obtained by other authors (especially with the results by Baranov and Rosenblum, Refs. 2-4). A

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scheme of Am^{241} decay and of Np^{237} levels had already been published in Ref. 24. The author has succeeded in proving formerly assumed transitions and integrating them by a number of new γ-transitions. Fig. 7 shows the scheme illustrating spin and parity of the levels and the multipolarity of the transitions, as well as the percentual participation of the different Np levels in α-decays. Most frequently α-decay occurs to the second excited level of Np^{237} (59.57 kev, $5/2^-$) with 85%; the decay to the third level (76 kev, $9/2^+$) amounts to 13%, then follows α_4 with 1.6%. α_0 and α_1 amount only to 0.39 and 0.24%, respectively. Decays to higher levels are unlikely (for instance α_5 - 0.014%). Finally particulars concerning the multipolarities of transitions are discussed. The author thanks D. V. Tinoshuk and P. Ye. Spivak for advice, D. P. Grechukhin and M. A. Listengarten for discussions as well as M. F. Karmalys and L. Ye. Morozova for assistance. There are 7 figures, 2 tables, and 28 references: 11 Soviet.

Card 3/3

BARANOV, S.A.; KULAKOV, V.M.; SAMOYLOV, P.S.; ZELENKOV, A.G.; RODIONOV, Yu.F.; PIROZHKOV, S.V.

Fine structure of α-radiation from Pa^{231} and energy level scheme of the Ac^{227} mucleus. Zhur. eksp. i teor. fiz. 41 no.5:1475-1483 N '61. (MIRA 14:12)

(Protactinium--Decay)
(Actinium) (Quantum theory)

31769
S/056/61/041/006/008/054
B108/B138

24.6400

AUTHORS: Baranov, S. A., Kulakov, V. M., Samoylov, P. S., Zelenkov, A. G., Rodionov, Yu. F.

TITLE: The radioactive decay of Np^{237}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1733-1739

TEXT: The authors studied the radioactive decay of Np^{237} by means of magnetic double-focusing α- and β-spectrometers, spectrometric proportional counters, scintillation spectrometers, and other device described in previous papers (e.g. P. S. Samoylov. PTE, 6, 33, 1959). The α-spectrum from Np^{237} is highly complex, consisting of 20 monoenergetic lines (Table 1). The resolution of the β-spectrum was rather poor owing to the low activity and thickness of the source. Data on new γ-transitions for Pa^{233} as determined from the electron and gamma spectra are given in Table 2. An energy level scheme for Pa^{233} is constructed on the basis of

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The radioactive decay of Np^{237}

the data obtained (Fig. 2) which is not, however, regarded as complete. The authors thank S. N. Belen'kom, K. I. Merkulova, A. A. Arutyunov, Yu. I. Dmitriyev, and the student at MIFI, Yu. I. Filenko for help as well as G. I. Khlebnikov for the radiochemical purification of Np^{237}. There are 2 figures, 2 tables, and 24 references: 6 Soviet and 18 non-Soviet. The four most recent references to English-language publications read as follows: D. Strominger, J. M. Hollander. UCRL-8289, Berkeley, California, 1958; F. Stephens et al. Phys. Rev., 113, 212, 1959; J. Hubbs, J. Winicur. Bull. Am. Phys. Soc., 11, 319, 1958; J. Hamilton et al. UCRL-9438, Berkeley, California, 1960.

SUBMITTED: June 21, 1961

Legend to Table 1: (1) forbiddenness factor, (2) level energy, kev. * Sum $J_{13} + J_{14} + J_Z = 2.178$. ** Sum of three lines $\alpha_x + \alpha_y + \alpha_{15}$.

Legend to Table 2: γ-transition energies (kev) of Pa^{233} obtained with (1) β-spectrometer, (2) proportional counter, (3) γ-spectrometer, (4) multipolarity.

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31770
S/056/61/041/006/009/054
B108/B138

24.6300

AUTHORS: Baranov, S. A., Samoylov, P. S., Rodionov, Yu. F., Belen'kiy, S. M., Pirozhkov, S. V.

TITLE: The energy levels of the U^{232} nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1740-1747

TEXT: To clearing contradictions in data on the U^{232} levels the authors studied the decay of Pa^{232}, which was obtained by irradiating Pa^{231} with slow neutrons. The measurements were made with a magnetic double-focusing β-spectrometer and a γ-scintillation spectrometer. Four new gamma transitions with energies 147, 236, 280, and 1150 kev have been discovered. On the basis of the β-spectrum, conversion electron spectrum, and γ-spectrum, certain data on the gamma transitions in U^{232} have been obtained (Table 3). It was not possible, however, to establish a complete level scheme. E0 transitions were found between the levels $0_2^+ \rightarrow 0_1^+$ and

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L 35356-66 EWT(m)

ACC NR: AR6017805 SOURCE CODE: UR/0058/66/000/001/A065/A065

AUTHOR: Vartanov, N. A.; Dmitriyev, P. P.; Krasnov, N. N.; Samoylov, P. S.

TITLE: Radioactive decay of tellurium-117

SOURCE: Ref. zh. Fizika, Abs. 1V151

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr. vyp. 1, 1964, 233-237

TOPIC TAGS: tellurium, radioactive decay, nuclear energy level, Gamma spectrum, Alpha interaction, neutron interaction, line intensity

ABSTRACT: To determine more accurately the decay scheme, a study was made of the γ spectrum of Te^{117} obtained via the reaction $Sn^{114}(\alpha,n)$. The measurements were made with a scintillation gamma spectrometer with NaI(Tl) crystal measuring 40 x 40 mm. The energy resolution for the 662-kev γline was 8.5%. Careful graduation of the crystal efficiency was carried out in the energy range 265 - 2760 kev. The following values were obtained for the energies (in kev) and for the relative γ-line intensities: 730 ± 10 (100), 940 ± 15 (4.5 ± 3), 1080 (5.5 ± 1.2), 1310 ± 20 (14 ± 2), 1740 ± 25 (16.5 ± 1.5), 2230 ± 25 (17.4 ± 2). The data obtained confirm in general outline the decay scheme proposed by Fink et al. (RZhFiz, 1962, 7B257). N. Voinova. [Translation of abstract]

SUB CODE: 18, 20

Card 1/1

VARTANOV, Nikolay Aleksandrovich; SAMOYLOV, Petr Semenovich; MATVEYEV, V.V., doktor tekhn. nauk, red.; KALYUZHNAYA, T.P., red.

[Practical methods of scintillation gamma-spectrometry] Prakticheskie metody stsintilliatsionnoi gamma-spektrometrii. Moskva, Atomizdat, 1964. 274 p. (MIRA 17:11)

AKHLAYEV, G. G.; BARTANOV, N. A.; SAMOYLOV, P. S.

"Results on Fluorescent Yields for the L Shell of Np and Pu "

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

EWT(m)
ACC NR: AR6016488 SOURCE CODE: UR/0272/65/000/012/0103/0104

AUTHOR: Arsayev, M. I.; Matveyev, V. V.; Mysev, I. P.; Rudakova, G. M.; Samoylov, P. S.; Sulimova, N. Ye.; Uskov, V. S.

21
B
19

ORG: none

TITLE: Development of scintillation and ionization methods in radiometry and dosimetry

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 12.32.899

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 5-13

TOPIC TAGS: x ray radiation, low energy beta ray, scintillation counter, radiation flux, soft bremsstrahlung, hard bremsstrahlung, bremsstrahlung

ABSTRACT: The major objectives of modern radiometry and dosimetry are discussed. These include the quantitative and qualitative analysis of radiation fluxes, the measurement of one type of radiation against the background of the others, the dosimetry of the soft and of the hard bremsstrahlung of accelerators

Card 1/2 UDC: 389.539.16

L 45126-66
ACC NR: AR6016488

and of impulse radiation fluxes, and the radiometry of low-energy beta rays in liquids and in gases. It is noted that one of the main trends in the development of radiometry and dosimetry is that of methods of scintillation measurement, on the basis of which a whole series of instruments for industrial use has been produced. Nevertheless, the use of ionization methods is more rational for certain dosimetric and radiometric tasks. The article presents a brief review of some modern instruments and equipment used to solve practical problems in radiometry and dosimetry. [Translation of abstract] [GC]

SUB CODE: 06, 18, 20/

Card 2/2

AKALAYEV, G.G.; VARTANOV, N.A.; SAMOYLOV, P.S.

Low-energy γ-transitions in Pu^{238} and Pu^{240}. Atom.energ. 16 no. 5:452-453 My '64. (MIRA 17:5)

ACCESSION NR: AP4036532 S/0089/64/016/005/0452/0453

AUTHORS: Akalayev, G.G.; Vartanov, N.A.; Samoylov, P.S.

TITLE: Low-energy gamma transitions in Pu sup 238 and Pu sup 240

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 452-453

TOPIC TAGS: plutonium gamma transition, curium admixture, gamma transition, low energy transition, Pu sup 238, Pu sup 240

ABSTRACT: This work has been prompted by the fact that data concerning the radiation of Pu^{238} and Pu^{240} does not contain a comparison of internal conversion coefficients (ICC) of gamma transition with the newly derived theoretical ICC values for the L and M conversions. Such a comparison is important to establish possible ICC anomalies of accelerated E2 electrons of strongly deformed nuclei. The gamma radiation spectra of Cm^{242} and Cm^{244} (whose alpha decay forms Pu^{238} and Pu^{240}) has not been studied as yet. In addition, it was interesting to distinguish the degree of purity of curium from other products. The results of this study are consolidated in two tables according to measurements made with a magnetic spectrometer

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ACCESSION NR: AP4036532

with double focusing at $\pi/2$ angle and a gamma-scintillator spectrometer with one NaI(Tl) crystal, 40x40 mm. It was found that the experimental ICC values for $L_{II}:L_{III}$ and $M_{II}:M_{III}$ coincide with the theoretical values with 5-10% accuracy. Admixtures of Eu^{154} and Eu^{155} were found. No interpretation of the Auger electrons was made. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 19Sep63 ENCL: 00

SUB CODE: NP NR REF SOV: 006 OTHER: 001

Card 2/2

ACCESSION NR: AP4042974 S/0048/64/028/007/1259/1263

AUTHOR: Akalayev, G.G.; Vartanov, N.A.; Samoylov, P.S.

TITLE: L-fluorescence yields from Np and Pu [Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tibilisi 14-22 Feb 1964]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 28, no. 7, 1964, 1259-1263

TOPIC TAGS: fluorescence yield, Auger electron yield, gamma ray spectrum, internal conversion, Coster Kronig radiation, neptunium, plutonium, nuclear radiation

ABSTRACT: The emission of x-rays and electrons from nuclei at $Z \geq 73$, where there is a sharp increase in L-fluorescence yields, is of interest because in this region both the Auger effect and Coster-Kronig transitions can occur. The essay at hand determines from the radioactive decay of Am^{241} and $Cm^{242,244}$ the mean L-fluorescence yields at $Z = 93$ and 94, as well as the fluorescence, Auger, and Coster-Kronig electron yields for the L_1, L_2, and L_3 subshells at $Z = 93$. The electron spectra of Am^{241} and $Cm^{242,244}$ in mixture with Eu^{154} were measured by means of a double focusing magnetic β-spectrometer; the γ-ray spectrum of

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ACCESSION NR: AP4042974

Cm was recorded on a scintillation spectrometer with an NaI(Tl) crystal coupled to an AI-100 100-channel pulse-height analyzer. The data on the γ-radiation from Am^{241} were taken from the work of P.P. Day (Phys. Rev. 97, 689, 1955). Some of the experimental spectra obtained in the present work are reproduced in figures. The values of the fluorescence, Auger, and Coster-Kronig yields arrived at on the basis of the experimental results are tabulated and compared with the results of theoretical calculations by M.A. Listengarten (Izv. AN SSSR, Ser. Fiz., 24, 1041, 1960). The agreement is generally good. The mean L-fluorescence yield for Z = 93 is about 0.66. Orig. art. has: 4 formulas, 4 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OP, NP

NO REF SOV: 004 OTHER: 004

Card 2/2

L 56654-65 EWT(m) Peb DIAAP

ACCESSION NR: AP5011870 UR/0120/65/000/002/0052/0053

539.16.07

AUTHOR: Aver'yanov, Ye. G.; Vartanov, N. A.; Samoylov, P. S. 14 13

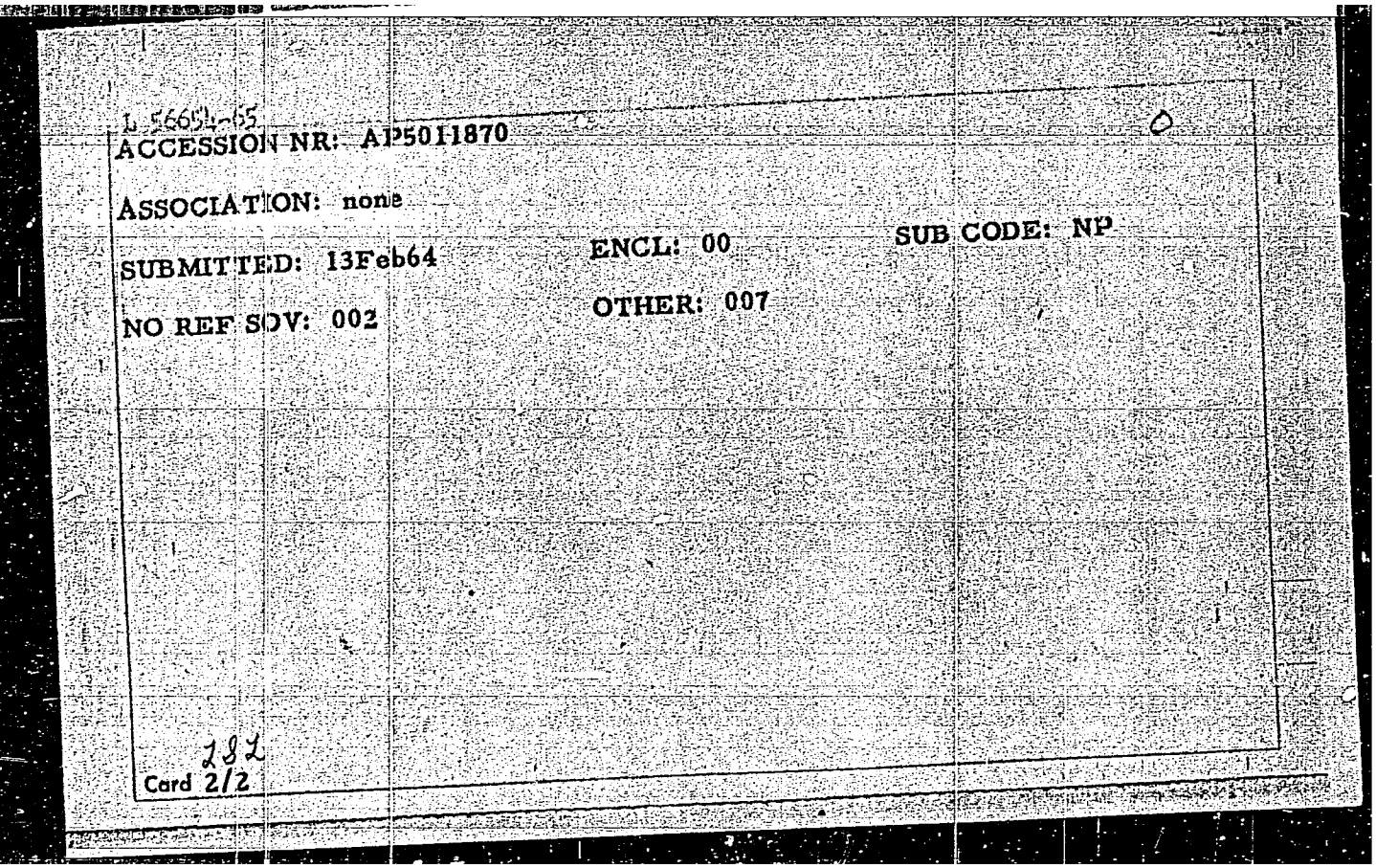
TITLE: Determining the energy resolution of a scintillation gamma spectrometer by means of a Co-sixty source 19

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1965, 52-53

TOPIC TAGS: spectrometer, gamma spectrometer, scintillation spectrometer

ABSTRACT: The effect of the energy resolution of a NaI(Tl) scintillation spectrometer (for a 1.33-Mev gamma line) upon the ratio of hard-line maximum to between-the-lines minimum for Co^{60} has been studied. In the estimated results, an experimental correction has been introduced which allows for the drooping of the Compton continuum between the lines. The resulting curve permits quick and reliable determination of the energy resolution on the basis of the measured Co^{60} spectrum; the result can be converted into the gamma-line resolution for any other energy value. Orig. art. has: 1 figure and 3 formulas.

Card 1/2



L 56654-65

ACCESSION NR: AP5011870

ASSOCIATION: none

SUBMITTED: 13Feb64 ENCL: 00 SUB CODE: NP

NO REF SOV: 002 OTHER: 007

Card 2/2

L 56652-65 EWT(1)/T/EEC(b)-2 Pi-4 IJP(c) GG
ACCESSION NR: AP5011872 UR/0120/65/000/002/0069/0073
539.1.074.3

AUTHOR: Vartanov, N. A.; Samoylov, P. S. 26 B

TITLE: Total efficiencies, photo shares, and photo efficiencies of NaI(Tl) and CsI(Tl) crystals 21

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1965, 69-73

TOPIC TAGS: NaI(Tl) photo characteristic, CsI(Tl) photo characteristic

ABSTRACT: These parameters are determined for Soviet-made crystals. The total efficiency was calculated, by the geometrical similitude method, for crystals having radius-to-height ratios of 0.5, 0.75, 1, 1.5. The calculation was done for the 0.1--8.0-Mev energy range and 14 values of the source-crystal distance (1.6—32 cm), with the assumption that a point source is located on the extended crystal axis. The photo shares were determined by interpolating the results obtained by the Monte-Carlo method for the crystals having a radius-to-height

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L 56652-65
ACCESSION NR: AP5011872 O

ratio of 0.5. From the values of total efficiency and photo share, the efficiency of photo recording was calculated. Curves of the photo efficiency of 40x40, 70x70, 100x100, 150x150, 200x200 NaI(Tl) cylindrical crystals vs. gamma-quanta energy (0.3—5 Mev) are supplied. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 13Feb64 ENCL: 00 SUB CODE: SS

NO REF SOV: 002 OTHER: 007

Card 2/2

ACC NR: AP6023078 (AN) SOURCE CODE: UR/0367/66/003/004/0598/0601

34
B

AUTHOR: Vartanov, N. A.; Samoylov, P. S.; Tsaturov, Yu. S.

ORG: none

TITLE: Gamma radiation of Sr^{85} 19

SOURCE: Yadernaya fizika, v. 3, no. 4, 1966, 598-601

TOPIC TAGS: gamma radiation, gamma spectrum, gamma quantum, strontium, strontium radiation

ABSTRACT: The γ-radiation of Sr^{85} has been carefully investigated. It was found that, in addition to the well-known 514-kev γ-quanta, 880-kev γ-quanta are also emitted. The relative intensities of these lines are equal to 0.010 ± 0.002 and 100, respectively. It has been shown that the 1220 kev γ-line, previously attributed to Sr^{85}, is absent in the γ-spectrum of Sr^{85}. The authors thank Ye. A. Zherebin for his help in the experimentation and L. I. Vartanova for the

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Card 2/2 fdp

ACC NR: AR6013632 SOURCE CODE: UR/0058/65/000/010/A041/A042

AUTHOR: Vartanov, N. A.; Samoylov, P. S.

TITLE: Emission probability of one and two annihilation quanta from an NaI(Tl) crystal in electron-positron pair production in the 1.5-5 Mev energy range

SOURCE: Ref. zh. Fizika, Abs. 10A370

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 59-62

TOPIC TAGS: pair production, electron positron pair, gamma quantum

TRANSLATION: The probability of the emission of one and two annihilation quanta from NaI(Tl) crystals of standard dimensions in the production of electron-positron pairs by γ-quanta in the 1.5-50 Mev energy range was determined experimentally. The AI-256 single-channel amplitude analyzer was used in the measurements. Depending on the size of the crystals, the following photomultipliers were used as pickups for the spectrometer: FEU-1B, FEU-13 and FEU-49. Na^{24} was used as a gamma source for 1380 and 2750 kev quanta. The measurements are presented graphically. The curves show that crystals of small dimensions emit two quanta with a considerably higher probability than one quantum. As the size of the crystal increases, the probabilities become comparable and for a 40 × 40 mm crystal comprise 40-50% of the area of the total absorption peak. Further increase in dimensions produces a sharp drop in the two-quanta curve until the

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ACC NR: AR6013632

probability of one-quantum emission is almost constant and equal to 20% of the area under the total absorption peak.

SUB CODE: 20

Card 2/2

BUDANOV, G.V., otv. za vypusk,; REZNIKOV, A.I., otv. za vypusk,; SAMOYLOV, P.V., red.; PEVZNER, A.S., red. izd-va,; TSYPERMAN, T.M., tekhn. red.

[Cost manual for the assembling of equipment] TSennik na montazh oborudovaniia. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam. No. 4. [Crushing and grinding mills, ore dressing and sintering equipment]. Drobil'no-razmol'noe, obogatitel'noe i aglomeratsionnoe oborudovanie. 1958. 93 p. (MIRA 11:12)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.
(Metallurgy--Equipment and supplies)

SAMOYLOV, R.S.

Study of moisture dynamics in a soil core sample using gamma-ray radioscopy. Trudy GGI no.109:151-162 '64.
(MIRA 17:9)

SAMOYLOV, S.

Samoylov, S. - "Mining training combines (The FZO schools nos. 30 and 46, Dnepropetr. oblast)," Proizvod. obucheniye, 1948, No. 12, p. 15

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

SAMOYLOV, S.

Mbr., Order Labor Red Banner Sci., Res. Physical Chemistry Inst. im. L. Ya. Karpov, Moscow, -c1948-. "The Problem of the Configuration of Polyphenyls and Triphenylmethyl," Zhur. Khim. Fiz., 22, No. 11, 1948.

SAMOYLOV, S.

May 49

USSR/Mining
Publications
Coal

"New Books and Journal Articles on Mining" 1 3/4 pp

"Ugol'" No 5

Briefly reviews various books and articles on mining, giving author, title, publisher and number of pages, including: M. I. Agoshkov's "Determination of the Productivity of a Mine," Ye. Fayerman's "Development of Scientific Analysis in the USSR Coal Industry," and S. Samoylov's "Ore Study Groups."

PA 50/49T83

SAMOYLOV, S.

25744, SAMOYLOV, S. Dnevnoy svet pod zemley. (K prisuzheniyu Stalinskoy premii I. L. Faybisovichu, Ya. M. Kaganovichu, T. B. Gorbachevu, Yu. M. Ribasu i V. I. Simonenko za razrabotku i vne drenie lyuministsentnlkh lamp v ugol'nuyu prom-st'). Znanie-sila, 1949, No. 7, s. 18.

SO: Letopis' Zhurnal' nykh Statey, Vol. 34, Moskva, 1949

1. SAMOYLOV, S.

2. USSR (600)

4. Railroads - Signaling

7. Signal lights on the locomotive. Nauka i zhizn' no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.

SAMOYLOV, S.

Gas generating locomotive. Nauka i zhizn' 20 no.5:36 My '53. (MLRA 6:6)
(Locomotives) (Gas generators)

SAMOYLOV, S.I.

TJ1160.A34 TREASURE ISLAND BOOK REVIEW AID 850 - S

SAMOYLOV, S. I.

OPYT IZUCHENIYA, OBOBSHCHENIYA I VNEDRENIYA DOSTIZHENIY NOVATOROV PROIZVODSTVA NA UZTM (Study, Generalization, Assimilation and Implementation of Improvements made by Innovators at the Ural Plant for Heavy Machine Building). In Akademiya Nauk SSSR. Peredovoy opyt novatorov mashinostroyeniya (Progressive Experience of Leading Men in the Machine-Building Industry) 1954. Part I: Skorostnyye metody mekhanicheskoy obrabotki metallov (High-Speed Methods in Machining of Metals). p. 24-29.

The author outlines several improved methods of production made by innovators of the Uralmashzavod (Ural Plant for Heavy Machine-Building in Sverdlovsk) and their introduction into practice. He presents the improvement of production methods as a continous process of betterment of the often-repeated, routine operations. He illustrates his point by a flow sheet showing old and new methods of making shafts for drums in drilling installations (chart No. 1), and describes a new method of cutting gears with hubbing machines (chart No. 2). An assimilated method of cutting large threads and worm gears is graphically presented in chart No. 3.

1/1

Samoylov, S.I.

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S/137/60/000/005/003/009
A006/A002

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 5, p. 204,

10610
18.7200

AUTHOR: Samoylov, S.I.

TITLE: Construction of Metallurgical Equipment and Modern Achievements

PERIODICAL: Sb. statey, Ural'skiy z-d. tyazh. mashinostr. im. S. Ordzhonikidze, 1958, No. 1, pp. 13-26

TEXT: Information is given on electroslag welding process used on important thick and heavy-weight parts (600 mm and 400 tons, respectively). The process provides for considerable savings in metal and machining time. The method of circumferential welding is used for the manufacture of forged-welded parts of hydraulic cylinders of up to 400 tons weight (for presses and excavators). The weight of the welded parts in the metal structures constitutes up to 57% of the total weight. The weight of single welded parts attains 200 tons. Examples are given on the fabrication of all-welded parts (for example: the front beams of the turnable of "ЭКГ-4" (EKG-4) and "ЭКГ-8" (EKG-8) excavators are assembled by welding, and are then welded into the platform). New technical problems are

Card 1/2

SAMOYLOV, S.I., prof.; ASHIKHMIN, V.N., inzh.

Broaching spur gear wheels. Trudy Ural. politekh. inst. no.112: 76-80 '61. (MIRA 16:7)

(Gear cutting)

SAMOYLOV, Sergey Ivanovich, prof.; GORELOV, Valentin Mikhaylovich, inzh.; BRASLAVSKIY, Veniamin Markovich, kand. tekhn. nauk; KONDRATOV, Yuriy Nikolayevich, inzh.; KALININ, Ignat Andreyevich, inzh.; KUROCHKIN, Vasiliy Mikhaylovich, inzh.; POPOV, Vladimir Artem'yevich, inzh.; KOZLOV, Kirill Georgiyevich, inzh.; FEDOROV, Boris Fedorovich, kand. tekhn.nauk; STEPANOV, Valentin Vladimirovich, kand. tekhn. nauk; DUGINA, N.A., tekhn. red.

[Technological processes in the manufacture of heavy machinery] Tekhnologiia tiazhelogo mashinostroeniia. Pod red. S.I.Samoilova Moskva, Mashgiz, 1962. 589 p. (MIRA 16:4)
(Machinery industry)

SAMOYLOV, S.I.; SYROMYATNIKOV, V.S.

Surface smoothness in shaving high-module gear wheels. Stan. i instr. 34 no.12:19-20 D '63.

(MIRA 17:11)

SAMOILOV, S.I.; SPIRIDONOV, V.D.

Improving the machinability of G 13 L steel. Trudy Ural.politekh. inst. no.129:113-116 '63 (MIRA 17:8)

SPIRIDONOV, A.A.; SAMOYLOV, S.I., prof., retsenzent; KUVSHINSKIY, V.V., kand. tekhn. nauk, red.; SUSTAVOV, M.I., inzh., red.

[Metal-cutting machines with programed control] Metallorezhushchie stanki s programmnym upravleniem. Moskva, Mashinostroenie, 1964. 279 p. (MIRA 17:11)

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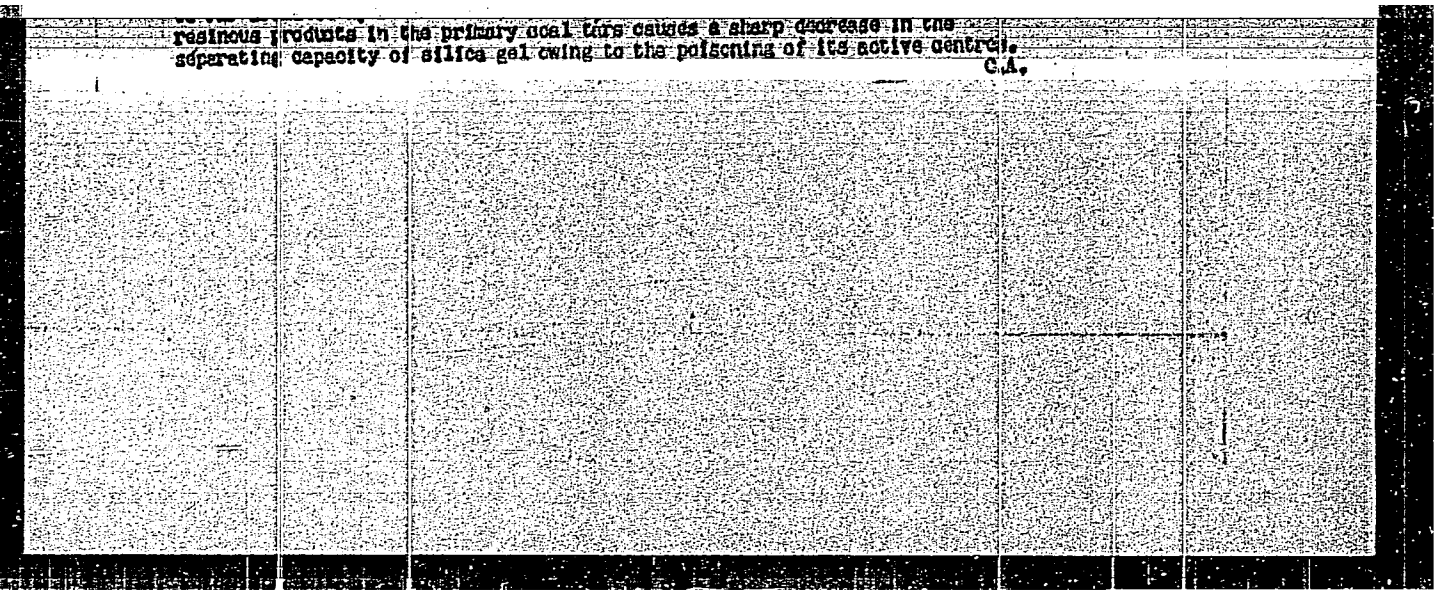
Shaving high-module high-rigidity gear wheels. Vest. mashinostr. 44 no. 4:45-48 Ap '64. (MIRA 17:5)



resinous products in the primary coal tars causes a sharp decrease in the separating capacity of silica gel owing to the poisoning of its active centers. C.A.

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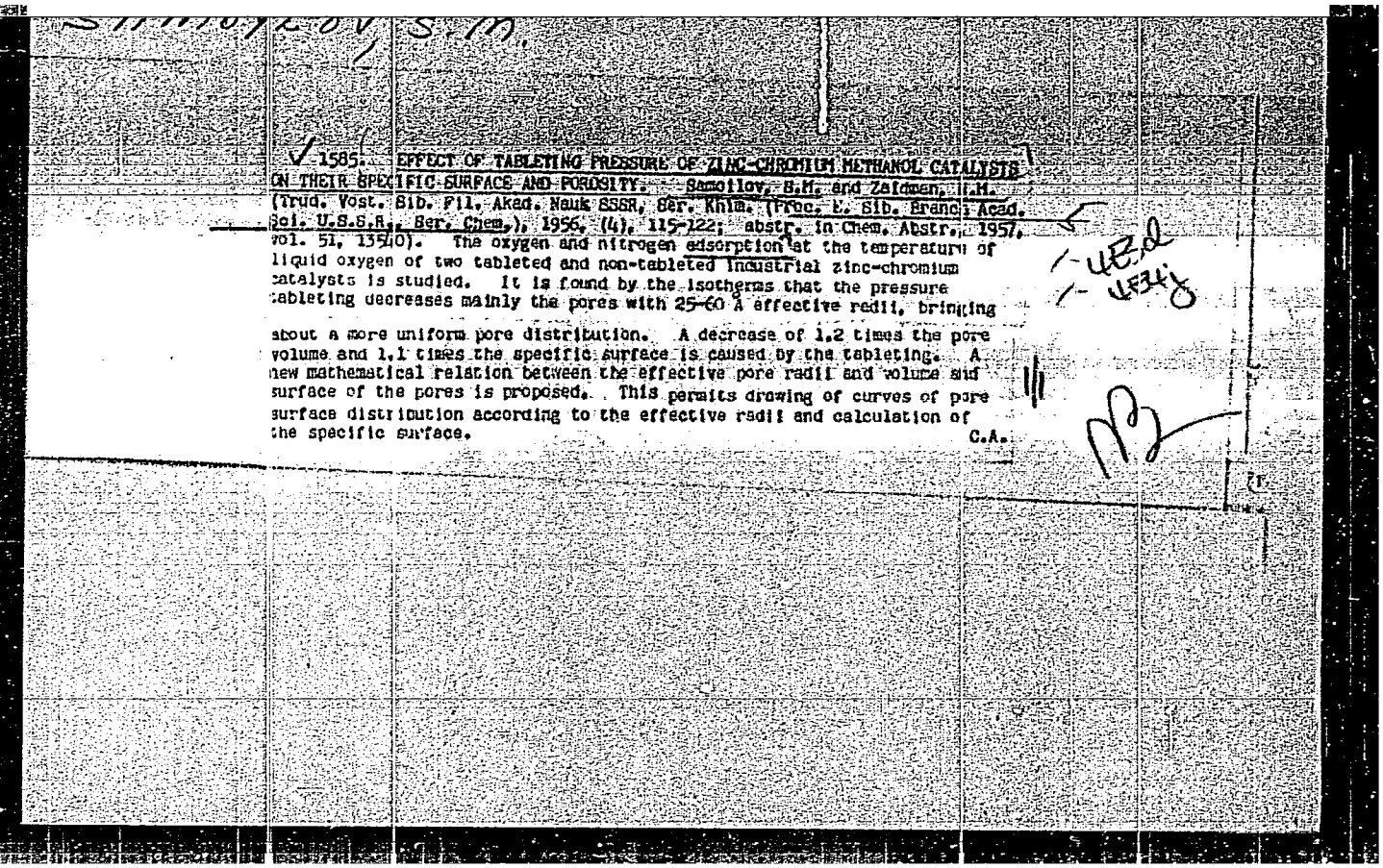

1585. EFFECT OF TABLETING PRESSURE OF ZINC-CHROMIUM METHANOL CATALYSTS ON THEIR SPECIFIC SURFACE AND POROSITY. Samoilov, B.M. and Zaikman, I.M. (Trud. Vost. Sib. Fil. Akad. Nauk SSSR, Ser. Khim. (Proc. E. Sib. Branch Acad. Sci. U.S.S.R., Ser. Chem.), 1956, (4), 115-122; abstr. in Chem. Abstr., 1957, vol. 51, 13540). The oxygen and nitrogen adsorption at the temperature of liquid oxygen of two tableted and non-tableted industrial zinc-chromium catalysts is studied. It is found by the isotherms that the pressure tableting decreases mainly the pores with 25-60 Å effective radii, bringing about a more uniform pore distribution. A decrease of 1.2 times the pore volume and 1.1 times the specific surface is caused by the tableting. A new mathematical relation between the effective pore radii and volume and surface of the pores is proposed. This permits drawing of curves of pore surface distribution according to the effective radii and calculation of the specific surface. C.A.

The change of catalytic effects in relation to the physical properties of WS_2 on its deactivation. I. V. Kalechits, K. A. Pavlova, and S. M. Samoilov. *Trudy Vostochno-Sibir. Filiala, Akad. Nauk S.S.S.R., Ser. Khim.* 1956, No. 4, 123-9.—By hydrogenation of C_6H_6 with fresh or already deactivated WS_2 by a standardized procedure and identifying the resulting products, it is found that the hydrogenating ability of the catalyst exhibits a major change, while the cleavage activity is a lesser one, and the isomerization capability is changed to a minor degree. X-ray studies indicate a slow recrystn. to the nonactive hexagonal form of WS_2. Specific surface and the distribution of pore sizes of the catalysts are studied by the adsorption isotherms of N at the temp. of liquid N. It is found that the vol. of pores of the deactivated WS_2 is 1.8 times less than that of the fresh one. The major change of pore vol. is due to the decrease of pores with a radius 20-80 A. Deactivation of the catalyst is considered to be the result of the recrystn. and the decrease of pore vol. 4 references. H. V.

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SAMOYLOV, S.M.; RUBINSHTEYN, A.M.

Physical and chemical properties of WS_2 catalysts. Report No.1: Effect of thermal treatment on the composition and adsorption properties of WS_2 obtained by the decomposition of ammonium sulfotungstate. Izv. AN SSSR Otd. khim. nauk no.10:1158-1165 O '57. (MIRA 11:3)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Catalysts) (Ammonium thiotungstate) (Thermochemistry)